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ABSTRACT

This guide is the sixth in a series of guidelines designed to be a framework for positive action at the school site and in the classroom through the High Schools That Work (HSTW) program, an effort to raise the achievement of career-bound students. It explains how providing students with a system of extra time and help can motivate them to meet high performance standards. Presented first are five reasons why the Southern Regional Education Board recommends that educators, parents, and community leaders should assist noncollege-bound students. Next, the goals and key practices of the HSTW program and the recommended program of study for career-bound high school students are listed. The necessary conditions for providing students with a system of extra help/time are discussed. The following strategies are suggested: (1) provide counseling and advisement services to help students discover a niche and achieve success; (2) hold students to higher standards and help them understand what it takes to meet those standards; (3) provide extra help and time for students to meet higher standards; (4) use technology to help students meet higher standards; (5) assign homework to motivate students to meet higher performance standards; (6) involve parents and the community; (7) arrange special help services for at-risk students; and (8) change the school's organization. Descriptions of exemplary practices at HSTW sites are included throughout the guide. (MN)

HIGH SCHOOLS THAT WORK

SITE DEVELOPMENT GUIDE #6

EXTRA HELP AND TIME

School Strategies: Motivating Students to Work Hard to Meet High Performance Standards

High-performance high schools create "communities" in which student learning is exciting and of primary importance. The purpose of this publication is to examine extra help and time practices that can raise the achievement of career-bound students.[1] This guide includes strategies from a number of *High Schools That Work* sites that are successful in raising expectations and getting students to meet higher standards.

REASONS TO ASSIST CAREER-BOUND STUDENTS IN MEETING HIGHER STANDARDS

SREB offers five major reasons for educators, parents, and community leaders to assist career-bound students:

■ All Students Can Achieve at a Higher Level

The SREB approach is based on the belief that most students can learn the essential concepts of the college preparatory curriculum. As a result of the emphasis on excellence, academic and vocational educators are developing ways to teach serious academic content to students whom many consider "less able" and unmotivated. Schools are rebuilding traditional teaching and learning processes to improve school completion rates and get more students to meet challenging academic and technical goals.

■ All Students Need and Deserve Intellectual Training

An underlying theme of the educational reform movement of the 1980s was to ensure that all high school students have an opportunity to receive "serious intellectual training traditionally reserved for the gifted and the privileged" (Toch, 1991). In keeping with that theme, the Southern Regional Education Board-State Vocational Education Consortium advocates a challenging program of academic and vocational studies that promotes higher academic standards and levels of achievement for all students. Schools in the SREB *High Schools That Work* program are reconstructing their curricula by developing rigorous programs of study that blend academic and vocational content.

■ The International Economy Is Highly Competitive

The rapidly changing global economy requires a new type of worker and citizen. Business and industry need employees who can reason, solve complex problems, and find and use information. Too few high school graduates today have these abilities. In an effort to educate all students for productive lives,

[1] Career-bound high school students are those who plan to work or enroll in a two-year community college or vocational-technical school rather than enter a four-year college or university immediately after high school. They may attend a four-year postsecondary institution in the future.

SREB-STATE VOCATIONAL EDUCATION CONSORTIUM
HIGH SCHOOLS THAT WORK PROGRAM

Goals

- To increase the mathematics, science, and communication achievement and the application of learning for career-bound students to the national average of all students.
- To integrate the essential content of traditional college preparatory studies—math, science, and language arts—with vocational and technical studies, by creating conditions that support school leaders and teachers in carrying out certain key practices.

Key Practices

- Setting higher expectations and getting career-bound students to meet them;
- Increasing access to challenging vocational studies, with a major emphasis on using high-level math, science, language arts and problem-solving competencies in the context of modern business and technical studies;
- Increasing access to academic studies that teach the essential concepts from the college preparatory curriculum through functional and applied strategies that enable students to see the relationship between course content and future roles they may envision for themselves;
- Having students complete a challenging and related program of study, including three courses in mathematics and three in science, with at least two credits in each course equivalent in content to courses offered in the college preparatory program, and having students complete at least four courses in a vocational major and two courses in related areas;
- Having an organizational structure and schedule that enable academic and vocational teachers to have the time to plan and deliver an integrated curriculum aimed at teaching high-status academic and technical content;
- Having each student actively engaged in the learning process;
- Involving each student and his/her parent in an individualized advisement system aimed at ensuring that each student completes an accelerated and coherent program of academic study with a vocational or academic major;
- Providing a structured system of extra help to enable career-bound students to complete successfully an accelerated program of study that includes high-level academic content and a major;
- Using student assessment and program evaluation information to check and improve the curriculum, instruction, school climate, organization, and management.
- Providing career-bound students access to a structured system of work-based learning that is planned in collaboration with high-status school-based learning—high school and postsecondary—and that results in an industry-recognized credential and employment in a career pathway.

school leaders are redesigning curricular offerings, instructional strategies, and school structures.

Rich Experiences Promote High Performance

SREB has found that rich and meaningful experiences motivate career-bound students to meet high performance standards. As schools provide positive and challenging experiences and reinforce high expectations, students begin to believe in themselves, and teachers begin to believe in students.

High Expectations Work

SREB's highest achieving *HSTW* sites operate on the premise that underachievers will blossom if they are exposed to instructional methods traditionally reserved for the brightest students. Teachers at *HSTW* sites who have become enthusiastic about teaching career-bound students share this reaction: "When we teach career-bound students the same way we teach gifted students, they respond with the same enthusiasm. When we ask career-bound students to tackle challenging projects and assignments, they respond like gifted students. When we tell career-bound students we expect them to read the same materials and engage in the same activities as the best students, they get excited and work harder to complete the assignment."

The *HSTW* program (high standards and higher achievement) fosters a strong sense of self-worth and educational accomplishment among career-bound students. Fully implemented, the *HSTW* approach can lower the dropout rate and reduce the incidence of other student problems. The assistant superintendent for instruction at Lexington 4 School District in South Carolina attributes a dramatic drop in teen pregnancies to students' enrollment in a more challenging program of study.

NECESSARY CONDITIONS FOR PROVIDING STUDENTS WITH A SYSTEM OF EXTRA HELP AND TIME

Certain conditions must exist in high schools and the school district to create a "community" in which career-bound students flourish:

The High School and the District Share a Vision of Student Achievement

The roles of educational personnel are critical in changing the way high schools prepare students (Mid-Continent Regional Educational Laboratory, 1988). Educators at all levels need to examine what others do and how they facilitate and inhibit each other in their job performance. High schools cannot motivate students to meet higher standards unless superintendents, school board members, and district staff share the vision and support improvement efforts.

HSTW sites making the most progress have superintendents and school board members who encourage risk taking and innovation in accelerating all students' learning. Effective district-level educators demonstrate—in words and actions—that they believe most students can master the essential content of the college preparatory curriculum. They also support school leaders with resources and flexibility to pursue accelerated programs of study for all students.

SREB RECOMMENDED PROGRAM OF STUDY FOR CAREER-BOUND HIGH SCHOOL STUDENTS

- 4 credits in college preparatory English;
- 3 or more credits in mathematics, with at least 2 credits in algebra, geometry, trigonometry, or advanced mathematics;
- 3 or more science credits, with at least 2 credits in biology, chemistry, physics, or honors/advanced courses;
- 4 credits in a vocational specialty;
- 2 credits in related vocational courses.

ENGLISH TEACHERS AT DELCASTLE TECHNICAL HIGH SCHOOL IN DELAWARE WORK TOGETHER TO IMPROVE STUDENTS' WRITING SKILLS

A few years ago, most students who attended Delcastle Technical High School in Wilmington, Delaware, did not write well and were not prepared for the new state assessment of writing required of every 10th grade student. Working together, English teachers from Delcastle and other schools in the New Castle County Vocational-Technical School District, developed a long-range plan to expect more of students and to improve students' writing skills. The first step was to determine how well the students could write. This was done by having all 10th-graders complete a beginning-of-the-year diagnostic writing assignment. In a one-day staff development activity, all 10th-grade English teachers met together to assess the papers and to develop objectives for writing instruction. Ninth-grade English teachers also met for a day to assess the diagnostic papers and to plan what they could do to enrich students' writing at that grade level.

As a result of these staff development days and summer curriculum workshops, 9th- and 10th-graders now participate in a course of study that emphasizes the components of good writing—topic development, organization, sentence structure, word choice, voice, and literacy—and requires students to complete eight major writing assignments a year. Currently, 9th- and 10th-grade teachers are developing criteria for assessing writing portfolios. The portfolios will assess whether students meet the standards for each paper and how much their writing improves during the year. The English specialist at Delcastle visits English classes to help teachers conduct one-on-one conferences during which students ask questions about their writing. Because of this intensive effort, a larger percentage of Delcastle students—compared to students at many other schools in the state—meet or approach state writing standards. Students feel good about their increased competence in writing; they know what they are expected to do, and they can look at their portfolios to see growth and the need for improvement. School officials agree that teacher acceptance of school-wide efforts to raise students' achievement has been the key to success. Plans call for an 11th-grade writing course of study and a stronger technical writing emphasis in 12th grade.

Successful *HSTW* sites have central office staff members who are committed to creating a framework and guidelines for working with the community in defining problems and developing an improvement agenda. In helping school leaders implement a plan, the central office staff can modify or waive policies, rules, and regulations to help schools test new strategies. MacPhail-Wilcox, Forbes, and Parramore (1990) found that professional and structural reform is impossible without regulatory relief.

Principals play a vital role in creating a school culture that encourages and supports students in mastering college preparatory content and completing a vocational major. Principals at successful *HSTW* sites involve academic and vocational teachers in developing, implementing, and revising a plan for revamping what and how they teach and what they expect of students. They use central office resources to achieve the *HSTW* key practices. They are also effective at building consensus within the community for the high school's plan.

Teachers adopt new instructional strategies and work in interdisciplinary teams to provide career-bound students with challenging academic and vocational studies. They define what is expected of students and how they will be evaluated on their work. They often serve as teacher-advisors to help students formulate a career and education plan.

The School and the Community Agree on Goals

Parents, teachers, and students at high achieving schools share clear goals and high expectations.

SUPERINTENDENT AND SCHOOL BOARD ROLE CHANGES AT SUCCESSFUL *HSTW* SITES

From	To
Manager and guardian of schools.	Community leader and advocate for higher expectations for all students.
Policy maker and overseer of centrally mandated procedures for uniform practices and results.	Supporter of the uniqueness of schools, communities, staff, and students in achieving *HSTW* goals.
Guardian of the status quo.	Guardian of improving the quality of education.
Overseer of the district.	Advocate for nurturing and supporting individual schools in achieving *HSTW* goals.

CENTRAL OFFICE ROLE CHANGES AT SUCCESSFUL *HSTW* SITES

From	To
Specialists.	Generalists committed to overall school improvement.
Independent workers with limited responsibility.	Team members with responsibility for team planning and decision making in supporting school improvement.
Authorities who enforce and reiterate policy.	Developers of policy frameworks and guidelines to facilitate improvement at the school level.
Staff isolated from school realities.	Staff who constantly help school-level personnel develop and implement their *HSTW* plan.
Inhabitants of the upper level of hierarchy.	Consultants and supporters of staff development, innovative teaching strategies, and a modified schedule within schools.

HSTW data suggest that students whose schools relate well to the community outperform students from other schools. To raise expectations, school leaders get parents and community leaders to commit to school improvement. Social service agencies and businesses provide coordinated services and develop new programs to improve students' readiness to learn and transition from school to work.

Teachers Support the Concept of High Expectations and High Standards

Teachers at schools that make progress in the *HSTW* program share the goal of higher expectations for academic and technical achievement. They internalize the *HSTW* goals and key practices and establish guidelines for staffing, scheduling, materials, assessment, curriculum, staff development, and resource allocation.

Faculty at high-achieving *HSTW* sites believe that most students can learn the essential content of the college preparatory program of study. School culture and climate—the way students and teachers perceive norms, expectations, and feelings—strongly affect student achievement (Brookover, et al 1979).

PRINCIPALS' ROLE CHANGES AT SUCCESSFUL *HSTW* SITES

From	To
Conduit of central office.	Leader, designer, and manager in developing a program aimed at students' increased performance.
Middle manager.	School leader with responsibility for involving staff and the community in implementing an improvement agenda.
Technical leader/administrator.	An educational leader who creates a high school in which high student performance is the norm.
Supervisor.	Staff developer who supports teachers in adapting more productive teaching methods.
School official.	A leader who involves parents and the community as partners in the high school system.
Maintainer of status quo.	Developer of new cultures that raise student expectations.

TEACHERS' ROLE CHANGES AT SUCCESSFUL *HSTW* SITES

From	To
Hired help who implement mandates.	Professionals with skills and capabilities for designing a high school reflecting the *HSTW* goals and key practices.
"Worker bees" in the system.	Professionals with the capacity to define problems, study alternative solutions, and select and implement a course of action.
Teachers who sort students into different course levels.	Teachers who make high-level courses accessible to most students by changing how they are taught.
Isolated employees.	Team players who interact and learn within interdisciplinary groups of professional and community leaders.
Classroom teachers.	Advisors to students and their parents in setting goals and planning high school studies.

Schools that give all students access to high-status courses:

- Advance the belief that school practices can nurture the intellectual growth of all students;
- Display a commitment to helping students connect high school studies to educational and career goals;
- Treat students as citizens of a learning community rather than products of an assembly line;
- Act on the belief that effort rather than innate ability brings success in life and forms the basis of life-long learning.

Too many schools make the mistake of involving a small group of teachers in changing the school while allowing the rest of the faculty to do business as usual. Successful *HSTW* sites begin with a few academic and vocational teachers who are willing to put their beliefs into action but move quickly to involve the entire faculty. At the same time, these sites engage the faculty in a year-long study of how to strengthen the existing system so that all students complete an upgraded academic core with an occupational or technical major.

Teachers and Administrators Work Together

Schools making changes to improve student achievement are more successful when academic and vocational teachers and administrators work together. Collaboration removes barriers between departments and between teachers and administrators. It encourages intellectual sharing that leads to consensus and promotes feelings of unity and common purpose among the staff. Successful *HSTW* site leaders build on the strengths of available staff by giving teachers time to communicate and cooperate in designing a challenging curriculum and instructional plan for career-bound students. Teachers need time to work in teams as they redesign what and how they teach.

Schools Develop a Sense of Community

Evidence indicates that a sense of community reduces alienation and increases achievement among career-bound students. Students and teachers at improving *HSTW* sites in 1990 and 1993 told SREB their schools were making progress in creating "communities" in which all students feel challenged and respected. High-achieving *HSTW* sites publicly emphasize the importance of student performance.

Schools Provide a Safe, Orderly Environment

A safe, orderly environment contributes to student achievement. Teachers cannot teach—and students cannot learn—in noisy or unsafe surroundings. Reasonable rules—fairly and consistently enforced—can reduce behavior problems and promote pride and responsibility.

Leaders of New Castle County Vocational-Technical School District in Delaware established a reporting system to track 10 key performance indicators for the district and at each school in the district. Educators use the data to evaluate progress toward goals, to compare the effects of various strategies, and to identify areas that need improvement. The indicators are:

- Student attendance;
- Discipline;
- Academic skills;
- Vocational skills;
- Market share (number of students who apply and register);
- Enrollment retention and graduation;
- Graduate followup;
- Staff attendance and job satisfaction;
- Customer (student and parent) satisfaction;
- The school's image and competitive position (students' awareness of the school and reasons for choosing it).

As a result of establishing a reporting system and setting performance standards, the district has

Table 1

IMPROVEMENT IN ATTENDANCE AND DECLINE IN SUSPENSIONS IN NEW CASTLE COUNTY (DELAWARE) VOCATIONAL-TECHNICAL SCHOOL DISTRICT

	1989-90	1990-91	1991-92	1992-93	1993-94 (YTD March 31)
Average Daily Attendance	89.6 %	90.8 %	91.5 %	91.4 %	92.1 %
Outside Suspension Rate (The ratio of outside suspensions to enrollment)	Not available	0.53	0.48	0.35	0.28

focused on the need for high performance in all 10 areas. Student attendance and student suspensions are two areas showing steady improvement (see Table 1).

STRATEGIES FOR PROVIDING STUDENTS WITH EXTRA HELP AND TIME TO MEET HIGHER STANDARDS

HSTW sites do not raise expectations so that students will fail; they do it to stretch students academically. In working to meet higher standards, students at successful *HSTW* sites enlist the help of teachers and other adults in and out of school. These teachers and mentors agree to provide assistance as long as students are willing to make the effort to learn. Teachers and leaders at *HSTW* sites use eight major strategies to assist students:

STRATEGY 1. PROVIDE COUNSELING AND ADVISEMENT SERVICES TO HELP STUDENTS DISCOVER A NICHE AND ACHIEVE SUCCESS IN SCHOOL

School teachers and leaders who want students to meet higher expectations help them set goals and encourage and assist them in achieving their goals. They provide an ongoing monitoring system in which responsible adults remain in contact with students and assist them as needed.

A good system of educational and career advising gives students opportunities to meet with their parents and a counselor or teacher advisor to learn about occupational possibilities, explore post-high school options, and develop a four- to six-year program of study. The emphasis is on helping students choose and pursue a focused program of study leading to a desired goal.

Students who succeed during freshman and sophomore years—when course failure rates are highest—are more apt to find a niche in high school. At some *HSTW* sites, teachers and counselors serve as mentors and advisors for students who need help during the first two years:

- The counselor at Hoke County High School in North Carolina works with students early in the school year to solve problems and plan for success.

- Extra help strategies have contributed to a dramatic reduction in the dropout rate at Leto High School in Tampa, Florida, a *HSTW* site that has made improvement in student achievement. The percentage of students dropping out declined from 9.4 percent in 1987-88 to 2.5 percent in 1992-93. Leto staff members work closely with personnel at the feeder junior high schools to identify students with poor attendance, poor school performance, and low motivation. When these at-risk students enter Leto, they are placed (with parental permission) into a Graduation Enhancement Program in which they have a counselor who remains with them throughout high school. The counselors monitor the students' progress, maintain communication between school and home, serve as advocates for

the students, arrange tutorial help as needed, and follow up with parents if students are absent.

- Students at Cookeville High School in Tennessee who miss 10 full days of school for any reason are asked to appear with their parents before an attendance review committee composed of administrators, counselors, and academic and vocational teachers. Because poor attendance usually goes hand-in-hand with low academic performance, the students are assigned to the academic assistance program that operates before and after school. Parents—who often do not realize their children are missing so many days of school—are enthusiastic about the attendance review committee, calling it "the best thing the school has ever done." The school also bolsters attendance by placing the daily absentee list on the telephone Lesson Line that parents may call after 4 p.m. each day.

- Several *HSTW* sites have crisis intervention programs for students who are failing because they do not complete their work or perform well on exams. Students are given a period of time to improve their grades. If they do not, a team from the school works with students and their families to develop a formal, workable improvement plan. The team monitors students' progress and meets with them regularly. In a crisis intervention program at Trigg County High School in Kentucky, the school psychologist works closely with freshmen who fail at least four of six classes. Students in this required program meet together each Thursday. The program focuses on cultivating self-esteem, developing study skills, and improving performance.

Strategy 2: Hold students to higher standards, and help them understand what it takes to meet those standards

Students will be judged for the rest of their lives on their ability to use academic and technical knowledge to do quality work, solve complex problems, execute their plans, be independent learners, be creative, and continue to learn. Therefore, good high schools make these abilities the focal point of instruction and assessment.

GRADING SYSTEM AT VOCATIONAL SCHOOL IN DENMARK INSPIRES STUDENTS TO WORK HARDER

Gene Bottoms, director of the *High Schools That Work* program, visited a vocational school in Denmark where students are required to produce products that teachers evaluate by using a 13-point grading system. A grade of 13 is awarded for "an exceptional, independent, and excellent presentation," while a grade of 0 represents "a completely unacceptable presentation." A score of 8 is average.

Each project receives a rating from 1 (lowest) to 3 (highest) on five categories of skills or personal attributes:

- ❑ Practical skills—the complexity of the tools and equipment used in producing the product;
- ❑ Theoretical skills—the general and specialized theoretical knowledge used in doing the project;
- ❑ Initiative and independence—whether the student worked alone or received help from the teacher;
- ❑ Cooperation—interaction from beginning to end, including product concept, design, parts and assembly, workshop use, and timetable;
- ❑ Creativity—originality of design, including shape, color, and practical use.

School leaders point out that the assessment system is used "first and foremost" as the basis for guiding students as they continue to learn.

Teachers at *HSTW* sites are focusing less on worksheets and memorized information and more on worthwhile individual and group projects rich in skills and content. In getting career-bound students to work harder and longer, these teachers are rethinking how to assess and grade the work they assign.

Accelerated learning shifts the emphasis:

- From retaining enough information to pass an exam to demonstrating an understanding of academic and technical content.
- From doing what it takes to get by to doing work that meets quality standards.
- From transferring all knowledge and information to students by lecture to actively engaging students in learning on their own and from others, including other students. The teacher's role is that of model and coach.
- From asking students to do drill and practice assignments that are void of meaning and usefulness to asking students to complete complex assignments that engage students emotionally.
- From simply covering material to understanding material. Students demonstrate that they can apply knowledge in unfamiliar situations.

Define Clearly What Is Expected of Students

New concepts in teaching and learning—such as teaching for understanding, quality work, and independent learning—require teachers to spend more time helping students understand what is expected of them. Teachers who motivate career-bound students to meet higher standards go to great lengths to help them understand what they are being asked to do and how they will be evaluated. If teachers want students to demonstrate understanding of an academic or technical concept, they define the circumstances under which students can use those concepts. If they want students to be creative, they define the dimensions of a creative effort or product. If they want students to use independent learning skills, they tell them what constitutes independence. If they want students to work effectively with others in completing a joint project, they give them ways to determine if they are good team members.

Interviews with career-bound students at *HSTW* sites reveal that these students work hardest in classes in which they know what they have to do to get an A, B, or C. When asked which teachers get them to work hard, they often describe a setting in which the teacher is very precise in describing what they have to do and how it has to be done. What they are asked to do must make sense to them. But above all, they must believe it is possible for them to do it. These students work harder in preparing for tests when they know what the test will cover and what they will be asked to do to demonstrate their knowledge of the material. These students perform best when teachers set forth the standards that a book report or written paper must meet.

Using Performance as the Basis for an Expanded Assessment Process

Teachers who successfully motivate career-bound students to work harder have broadened their approach to assessment. Testing and homework remain important components, but the process has been expanded to include other methods such as ongoing critiques of student work, greater use of student appraisals, and portfolio evaluation.

In the new approach to assessment, teachers observe students in a variety of areas—thinking, learning, and performance—in addition to testing basic knowledge and skills. They use appropriate assessment instruments and procedures to monitor students' skill in reasoning and solving real-world problems, seeking and applying information, and using technology for increased effectiveness and productivity.

Developing Students' Capacity to Critique Each Other's Work

Greater use of formal and informal critiques of students' work on an ongoing basis will nurture students' intellectual growth. Teachers can help students develop terminology and a process for evaluating their work and that of others. Often, teachers invite journalists, architects, carpenters, or other practitioners to visit the classroom so students can learn the language of an academic or technical field.

A new culture emerges in the classroom or vocational shop when students spontaneously critique their work and that of others.

Getting students to evaluate themselves is the ultimate goal of assessment. Students who understand how to critique an assignment or project will constantly assess their own work to decide what is right or wrong, appropriate or inappropriate, and high quality or inferior.

Using Assessment to Hold Students to High Standards

Self-appraisal and peer appraisal can also help students decide what is acceptable to their teachers. If students believe they can make passing grades on sloppy work, they reduce their efforts and blend in with the crowd. It is important for teachers to hold students to high standards.

As students assess their work and that of others, they bring a new level of energy and excitement to education. Peer assessment creates a new level of understanding of quality work and shifts some of the feedback, assistance, and suggestions from the teacher to the students.

Using Portfolios for Assessment

Some academic and vocational teachers are beginning to use student portfolios in assessment. Portfolios can be folders filled with junk—or a good way for students to collect examples of quality work that required a great deal of time and effort. Portfolios can include videotaped presentations, products designed and produced, written documents, and materials read and analyzed. A major portfolio project is a way to engage students in designing and directing an important long-term project in which they make personal investments.

Using Authentic Assessment

Costa (1993) indicates that authentic assessment is vital to student evaluation. He contends that "We cannot employ traditional product-oriented assessment techniques to evaluate the achievement of these new, process-oriented standards. Skillful teaching teams and students themselves (who are the best collectors of assessment data) will, over time, observe, record, interpret, and report evidence of growth toward and achievement of these standards." He proposes using the following assessment strategies:

- Observe students' performance in collaborative problem-solving situations;
- Collect logs, journals, and portfolios of students' work;
- Interview students to determine how they see themselves as problem solvers;
- Monitor students' growth in their ability to understand and use information;
- Use internal and external criteria to assess students' displays, exhibits, and performances;
- Use media and advanced technology to collect and record information.

Changes in classroom practices are necessary to make greater use of assessment and grading as a way to motivate career-bound students to achieve higher standards (see Page 12).

Strategy 3: Provide Extra Help and Time for Students to Meet Higher Standards

Many career-bound students need extra help and time to demonstrate their understanding of major academic and technical concepts, produce quality papers, present projects, and pass tests.

The flexible use of time is necessary in getting career-bound students to meet higher standards. Time and schedules are important resources in helping more students meet the target goals of the *HSTW* program.

Educators at *HSTW* sites are rethinking the relationship between time and learning. They are 1) increasing the amount of time for learning and 2) rethinking the way time is used in the classroom.

Increased Time for Learning

HSTW sites that accelerate the instructional pace keep students attentive and learning at a productive rate. Acceleration is not a radical concept

CAREER-BOUND STUDENTS WORK HARDER IN CLASSROOMS IN WHICH ASSESSMENT AND GRADING PROCEDURES FOCUS ON TEACHING AND LEARNING RATHER THAN SORTING AND SELECTING

Teachers who sort and select say:	Teachers who emphasize students' learning say:
1. The paper cannot be done over; you had your chance!	1. You may continue to revise your paper on your own time; I hope you will work on it until you can earn an acceptable grade.
2. You cannot retake a test to improve a low grade.	2. You can arrange a time after school or before school to retake a test. The goal is to keep students wanting and working to do better instead of giving up.
3. Work cannot be made up from unexcused absences, such as suspensions and unexplained cuts.	3. Regardless of the reason, I encourage students to make up any work missed.
4. Even if you show mastery of content, your grade is low because some assignments (homework, projects, notebooks) were not completed.	4. A respectable passing grade can be earned with evidence of content mastery. Low marks may be shown on the non-academic side of the report card for work not completed or directions not followed.
5. As a teacher, it's my job to teach; it's their job to learn.	5. I feel responsible for student learning. Teachers and other school personnel work continuously to create a system that results in more students meeting standards.
6. Work is graded by taking into account non-academic standards such as neatness, form, attractiveness, etc.	6. Work is graded only after non-academic standards are addressed.
7. I use formative *and* summative grading.	7. I use formative feedback, but summative grading! I use a formal critiquing process to help students raise their knowledge to desired standards.
8. I take pride in the ability of an exam to discriminate.	8. I take pride in the number of students who earn acceptable grades. My emphasis is on teaching to high standards and getting all students to meet them.
9. I expect students to figure out what material will be tested.	9. I outline objectives, highlight material to be tested, and make tests congruent with my teaching. I use tests to encourage students to master the essential concepts.
10. My exams contain multiple-choice, fill-in-the-blanks, and low-level questions.	10. My exams reflect higher order questions that require students to respond in their own words.
11. Student grades are fixed and cannot be changed.	11. Rather than award an F to students failing a grading period or course, I assign an Incomplete and define exactly what students must do to remove it.

when school leaders and teachers consider it in relation to time and learning. Traditionally, career-bound students who are failing are placed in lower level courses or a remedial program in which they are pulled out of regular academic and vocational classes and are taught the same material in the same way, only at a slower pace. This approach does not work. The answer is to hold students to higher standards and give them more time to meet them by extending the school day, week, or year.

The *HSTW* program is based on the view that standards should not be lowered. Students should have the opportunity to work at their own pace—with tutoring arranged by the school if necessary. This process assures that students who met the standard initially are not idle while others catch up during regular class time. As teachers at *HSTW* sites define performance standards and grading procedures that allow students to continue to work to meet standards, they also develop options for providing extra help and time.

Successful extra help and time systems at *HSTW* sites have these distinguishing features:

- **The school has a process for identifying students who need extra help and time to meet course standards.** The process begins with teachers who encourage students who are having difficulty in their classes to take advantage of the extra help and time system. At the end of each grading period, counselors and teacher-advisors identify students who failed and refer them individually to the system. If students do not participate, the counselor schedules a conference with the students and their parents.

- **The system is staffed by teachers who want to help. They believe they can make a difference in getting many more students to meet high standards.** The system is not an extra burden for teachers. They are paid for extra work and time, or they teach fewer classes during a normal school day.

- **Any student can participate in the system.** However, most *HSTW* sites have learned that some students who need extra help and time will not volunteer for it. In those cases, a counselor or teacher meets with the students and their parents to discuss the need for extra help and to develop a plan for accessing the system.

- **Parents understand and support the system.** Schools provide parents with information about the system and urge them to have their children sign up if they have difficulty meeting standards in a given course.

- **Students who fail key courses (such as English and mathematics in grades 9 and 10) in any grading period receive mandatory extra help.** Parents of all students in these courses sign a letter of understanding that children who need it will participate in the extra help and time system. Students and parents need to understand up front that certain benchmark courses are important and that assistance is available to help students master them.

- **Transportation is provided.** Transporting students from school to home at non-scheduled times is a problem in some communities. The most successful *HSTW* sites arrange for transportation so that students can participate in the extra help system.

Very few vocational graduates at *HSTW* sites in 1993 reported receiving extra help in reading and mathematics from a resource teacher or special tutor. About one-fourth received help from their vocational teachers in mathematics (26 percent) and reading (20 percent); about two-thirds received extra help from their mathematics instructors; and 39 percent reported receiving extra help from their English teachers. A lot of career-bound students who need extra help to meet high standards do not receive it from *HSTW* sites.

On the other hand, SREB data show that students at *HSTW* sites making the most improvement received more extra help from family, academic and vocational teachers, resource teachers, and tutors in 1993 than in 1990. Clearly, a supportive environment is important in raising student achievement (see Tables 2 and 3). New sites will want to adopt the successful extra help strategies of high achieving *HSTW* sites as they strive to achieve the program's goals and key practices.

HSTW sites provide extra help and time in a variety of ways:

Before- and after-school programs—An extended-day program allows students to complete assignments or homework with assistance from teachers or other students individually or in groups. An after-school program at Trigg County High School in Cadiz, Kentucky, operates for an hour and a half every Wednesday. Students receive extra help in mathematics, science, language arts, social studies, and technical subjects. The program is funded by a state department of education extended services grant that pays for teachers and transportation. Teachers participate as part of their teaching contracts. Schools that have similar programs include Howard High School of Technology in Delaware, Hoke County High School in North Carolina, and Woodlawn High School in Louisiana.

Wheeling Park High School in West Virginia requires students who are absent from school for more than six days to participate in an after-school extra help program. Two sessions per week are offered, and transportation is provided.

At some *HSTW* sites, students who fail a course in any grading period are required to attend a repeater class after school until they meet the standards and receive a passing grade. At other schools, students who fail the first semester attend a repeater course after school three days a week. The intent of repeater classes is to help students meet high standards and give them experience as "workers" who do what it takes to produce an acceptable product. Since the workplace does not tolerate failure, the school cannot either.

Hoke County High School added three regular 55-minute class periods to the school day. The classes—which begin at 3 p.m. and end at 6 p.m.—are in social studies, mathematics, science, and vocational education. Three types of students generally enroll in the extended day classes:

- Students who are behind in course work—for example, juniors who should be seniors;
- Students who have fallen behind during the school day;
- Students who cannot fit certain classes into the regular school day.

The classes are smaller—from 10 to 20 students—enabling teachers to cover more material in

Table 2

AVERAGE NAEP READING SCORES OF VOCATIONAL COMPLETERS * ACCORDING TO THEIR SOURCES OF EXTRA HELP AND THE PERCENTAGE OF THESE STUDENTS RECEIVING HELP FROM ONE OR MORE OF THESE SOURCES (RANDOLPH COUNTY, VIRGINIA)

Received Most Help from:	1990 *High Schools That Work* Student Assessment	1993 *High Schools That Work* Student Assessment
Family	50 % (54.2)	66 % (57.5)
English Teacher	50 % (54.9)	57 % (57.4)
Vocational Teacher	25 % (53.2)	37 % (57.9)
Resource Teacher	20 % (50.6)	20 % (57.4)
Tutor	6 % (49.4)	7 % (58.2)
Average NAEP Reading Score for this *HSTW* Site	53.8	57.5

* SREB defines a vocational completer as a student who completes at least four credits in an approved vocational area and takes three mathematics and three science courses. At least two of the courses in each category should be equivalent to the college preparatory level.

Table 3

AVERAGE NAEP MATH SCORES OF VOCATIONAL COMPLETERS * ACCORDING TO THEIR SOURCES OF EXTRA HELP AND THE PERCENTAGE OF THESE STUDENTS RECEIVING HELP FROM ONE OR MORE OF THESE SOURCES (PHENIX CITY, ALABAMA)

Received Most Help from:	1990 *High Schools That Work* Student Assessment	1993 *High Schools That Work* Student Assessment
Family	48 % (279.0)	58 % (286.1)
Math Teacher	60 % (282.2)	72 % (287.7)
Vocational Teacher	21 % (283.9)	37 % (285.7)
Resource Teacher	3 % (282.2)	11 % (283.1)
Tutor	8 % (282.0)	11 % (288.5)
Average NAEP Math Score for this *HSTW* Site	285.3	291.1

* SREB defines a vocational completer as a student who completes at least four credits in an approved vocational area and takes three mathematics and three science courses. At least two of the courses in each category should be equivalent to the college preparatory level.

a shorter period of time. Certified classroom teachers teach the courses, and student transportation is provided.

Evening, Weekend, and Summer Programs—Some *HSTW* sites provide instructional opportunities in the evening, on the weekend, and in the summer.

- Students at Canton High School in Mississippi who fail to meet course objectives in English, mathematics, science, or social studies in a particular grading period can attend tuition-free Saturday morning classes. Classroom teachers notify students, their parents, and the Saturday teachers of the students' deficiencies. The school pays the teachers for their extra work as they meet with students individually or in small groups to help them master objectives. Students can work on an objective as long as necessary. School leaders can document that the extra help system contributes to a higher promotion rate.

- Students with excessive absences or tardies at Maplewood High School in Nashville, Tennessee, can attend a Saturday program to make up work they miss. The program operates from 8 a.m. to 11:30 a.m., and each Saturday session counts as a replacement for one day's absence. Before a student reaches 15 days absent in one semester, teachers write a letter to the student's parents to urge them to place their child in the program. Parents provide transportation. The school asks parents to sign a "contract" with their children to assure they will attend. The English, mathematics, and social studies teachers who volunteer for the program are paid for their time. The librarian also participates in the program, and the principal is there every week to help. The lessons emphasize fundamentals, since students with poor attendance records usually need help in basic concepts, but the students' regular teachers also identify specific work for Saturday teachers to cover.

- Students and teachers benefit from a four-week summer program in New Castle County, Delaware, which combines staff development with extra help for students. In the first week, teachers attend a mathematics institute in which they learn new instructional methods and have an opportunity to share their best practices. Teachers use the mathematics practices from the staff development session in a three-week extra help session for students.

- In addition to second semester and summer repeater courses, Woodlawn High School in Shreveport, Louisiana, offers a concentrated "repeater camp" for two weeks (one-half credit) or four weeks (one credit) each June. Students retake English, mathematics, or science in a class that meets Monday through Friday from 8 a.m. to 2:15 p.m. Certified teachers with proven success in working with at-risk students are recruited from several schools to teach the classes. Their salaries come from the tuition fees students pay to attend the course. Repeater camp enables students to continue in the same grade classification and does not impede progress in their career pathways. Students who habitually have trouble with their studies do particularly well in repeater camp. They benefit from focusing on one subject during a longer class period in a concentrated period of time. One student said, "I learned more in repeater camp than I did during the regular school year. There were no distractions, and the teachers were great."

- Sussex Technical High School in Georgetown, Delaware, provides free after-school tutoring to any students who want to attend. The service is called Techademic Coaching to promote the positive nature of the program. Teachers coach students in Principles of Technology, English (all grade levels), Algebra I and II, Applied Mathematics, biology, chemistry, geometry, and library/research skills. Coaching begins after the regular school day (3:15 p.m.) and ends at 5:30 p.m. Students ride late activity buses to drop-off points near their homes.

The school notifies students and parents about the service through:

- A program of study provided to every student and parent;
- A description on each report card and interim report sent to the students' homes;
- Reminders in the daily school bulletin;
- Posters in classrooms and hallways;
- Parent/teacher conferences;
- Letters to parents or guardians;
- Individual recommendations to students;
- Student handbook.

Sussex Tech teachers, who are knowledgeable about the curriculum, are paid extra—just as athletic coaches are paid—to provide academic coaching. During the past two years, teachers have developed creative ways to use Techademic Coaching to help students increase their achievement. For example, mathematics teachers allow students to retake failed tests if they attend at least one Techademic session and retake the test as part of the after-school program. As a result, mathematics grades have improved significantly.

Techademic Coaching enables many students—including many very good students who attend—to be successful with the rigorous, sequential curriculum at Sussex Tech. The program is a major factor in the school's successful efforts to set and maintain high student performance standards.

- The Sussex County Vocational-Technical School District offers an alternative education program for students who have been retained or have failed a course required for graduation. The program was established and is funded by the State of Delaware to provide flexible and non-traditional educational opportunities for students in danger of dropping out of school. Data show that the program is effective in reducing the dropout rate.

  This tuition-free program is available to all students at Sussex Technical High School through a partnership between the school and James H. Groves Adult High School. Students may take required English, social studies, science, or mathematics courses from 6 p.m. to 8 p.m. or from 8 p.m. to 10 p.m. and in the summer. The courses are rigorous and meet all state curriculum standards. Teachers are drawn from Sussex Tech, the James H. Groves program, or other school districts. To qualify, students must be taking at least one course at Sussex Tech. Transportation is available on the school's late activity buses. Research shows that students who fail a grade and fall behind their peer group are the most frequent school dropouts. This program enables students to remain on grade level and continue in their career path.

Rethinking the School Schedule to Gain More Instructional Time

To increase instructional time for career-bound students, some *HSTW* sites are switching from a traditional six- or seven-period schedule to a block schedule that gives students longer class periods. Robert Lynn Canady, professor in the Department of Educational Leadership and Policy Studies at the University of Virginia, cites limitations of the old 45 to 55-minute period:

- Teachers rely too much on the lecture-discussion model of instruction;
- Little or no time exists for follow-up, reinforcement, extended lessons, or research;
- Valuable time is lost in starting and stopping a class;
- Start-up and clean-up times are duplicated, particularly in subjects that have labs;
- Record keeping is multiplied;
- Teachers find it difficult to deliver true interdisciplinary units of study;
- Teachers suffer the emotional demands of teaching 125 to 150 students a day;
- Students must deal with the requirements of seven or more teachers a day;
- Students have limited opportunities to remain with their peers and/or support groups;
- Some students have too many courses, homework assignments, and tests to juggle;
- Students must adapt to a variety of academic and behavior requirements;
- Opportunities to re-teach or re-test are limited;
- Many students have to remain for a full year in a course they are failing;
- Few opportunities exist to accelerate or "cross the tracks";
- Class changes in some schools are a form of madness;

Canady offers a number of advantages of block scheduling:

- A 90- to 100-minute period is more productive. When a class period is limited to 45 or 50 minutes, teachers have little or no time to follow up, reinforce, present extended lessons, or engage students in the type of hands-on project learning advocated by the *HSTW* program. Teachers lose valuable time beginning and ending short classes, setting up and cleaning equipment in short lab sessions, and keeping multiple records on students in six or seven different classes a day. **Schools that use longer blocks of time can gain four to six weeks a year of instructional time, Canady says.**
- Longer classes allow teachers to deliver interdisciplinary units of study.
- With fewer students, teachers can take more interest in helping career-bound students achieve their education and career goals. Surveys at *HSTW* sites continue to show that career-bound students do not see academic teachers as the ones who care most about them. Longer class periods and fewer classes help career-bound students develop a sense of belonging. Block scheduling allows them to remain with a core group of students and a small group of teachers who support and nurture them and work together to plan challenging, relevant learning activities. Career-bound students—many of them at risk of failing or dropping out—need teachers who stay with them over time, get to know them as individuals, recognize their potential, and believe they can meet high standards. Block scheduling helps meet those needs.
- Longer class periods provide more opportunities for students to succeed.

High schools that integrate the academic and vocational curriculum and offer more applied academic instruction are finding a need for longer periods of time in academic classes—similar to the large blocks of time traditionally used in vocational classes.

The block scheduling model at Sussex Technical High School is based on an "odd day" and "even day" schedule in which seven periods are spread over two days. Period one lasts 60 minutes and meets daily. It

includes homeroom responsibilities, attendance, announcements, and other activities. Periods 2 through 7 are 90 minutes in length, but only three of these periods meet in any one day. The remaining three meet on the next school day.

Block scheduling is enabling Sussex Tech to improve student learning. In addition, the school has found that block scheduling:

- Enriches an applied curriculum;
- Gives teachers and students more time together;
- Accommodates field trips and simulations;
- Increases laboratory time;
- Defuses potential discipline problems;
- Promotes teacher/student interaction;
- Increases student research.

The principal at Sussex Tech believes block scheduling is the reason for improved student achievement at his school.

Howard High School of Technology in New Castle County, Delaware, offers mathematics and biology in two-period blocks in ninth grade. The schedule enables students to concentrate on one subject for a longer period of time and relate better to their teachers. School officials report that the schedule contributes to a higher student success level, fewer failures, and better attendance. Delcastle Technical High School, also in New Castle County, will offer biology and English in two-period blocks, beginning in the fall of 1994.

A semester block schedule can provide time for catch-up instruction for carer-bound students in grades 9 and 10. Many career-bound students entering ninth grade are behind in basic communication and mathematics skills. They will not be able to meet *HSTW* achievement levels unless they undertake an accelerated program of study. A semester block scheduling plan can provide a way for career-bound students to get two years of English and two years of mathematics in the ninth grade (see Table 4). The first semester focuses on catch-up instruction in English and mathematics, while the second semester offers college prep English and either Applied Mathematics II or Algebra I. Basic English and mathematics courses in the first semester are linked to a computer class enabling students to use word processing and other software to write papers and do mathematics. In the second semester, mathematics and English courses are linked to a technology education course in which students connect reading and mathematics to the technology lab. Students can take physical education and/or health education in the first semester and physical science or social studies in the second. In this model, students delay taking one of the traditional subjects until Grade 10. A big advantage of semester block scheduling in the ninth grade is that students who are behind in mathematics and communication get a double dose as they enter high school.

During the first semester of Grade 10 in a semester block scheduling system, these students take col-

Table 4

ALTERNATE SEMESTER BLOCK SCHEDULE (8 POSSIBLE COURSES) GRADE 9

Periods	Semester 1	Semester 2
1 and 2	Course 1: Basic English	Course 5: College Prep English
3 and 4	Course 2: Applied Math I	Course 6: Applied Math II or Algebra I
5 and 6	Course 3: Computers/Word Processing	Course 7: Technology Education
7 and 8	Course 4: Physical Education	Course 8: College Prep Physical Science

lege prep English, social studies, word processing, and physical education. The academic teachers and the business teacher work together to make subjects more meaningful to students. In semester two, students take geometry, Algebra II, or Applied Mathematics II; physical science; and technology education. The technology education course is closely linked to the mathematics and physical science courses. Students can take an elective in the fourth period of the second semester or reserve the period for extra help they may need to complete the 10th grade.

Socastee High School in Myrtle Beach, South Carolina, schedules Advanced Placement classes in a 100-minute block and opens the classes to any student who wants to enroll. Students earn two credits per course: a credit for AP instruction in an academic area and a research credit. As a result, enrollment in AP classes has grown by over 20 percent, and the percent of students scoring 3, 4, or 5 on the AP exams has increased from 72 percent to 90 percent. Block scheduling can offer similar advantages to career-bound students. A high school organized on the semester block schedule plan makes it possible for students to take as many as 32 units. With this type of schedule, students can concentrate more fully in an occupational area while mastering the academic foundations they need. Teachers gain instructional time through a reduction in record keeping and start-up activities. They have more time to spend with students, to work with other teachers who have the same students, and to engage in common planning time.

HSTW sites that have adopted block scheduling say the challenge is to get teachers to use the block of time effectively and creatively. With this type of schedule, teachers place more emphasis on cooperative learning, peer tutoring, applied learning activities, and research-focused learning to engage students in in-depth studies. The major advantage of the semester block schedule is that it gives career-bound students an opportunity to achieve the upgraded academic core advocated by SREB in the *HSTW* program.

Strategy 4: Use Technology to Help Students Meet Higher Standards

Technology fascinates career-bound students. They want to know how to design, use, and fix modern devices. Many *HSTW* sites consider technology a "secret weapon" in motivating these students to

STUDENTS CREATE INTERACTIVE MULTI-MEDIA PROGRAMS IN NEW COURSE AT FOREST PARK HIGH SCHOOL IN GEORGIA

Students in an interactive multi-media course at Forest Park High School in Georgia use a variety of software to create interactive computer programs on topics they select. They spend as much time as needed to complete a program; for example, one student spent four months researching and writing a program on the War Between the States. Other students during the past year created programs on the four-stroke engine and construction of an outdoor storage building. The result is a program that students in other classes can use. Because the programs are interactive, users are able to branch off in many directions. That means the students who create the programs have to do research in the media center and elsewhere to find a large amount of information. "Students learn more about a particular topic than they would in an ordinary classroom," the multimedia instructor said. The course holds the interest of students because it is "fun and flashy," she said. "We practically had to chase students away from the computers when school closed for summer vacation." One student who lacked language arts skills prepared a 45-minute program on the Vietman War. "He had to improve in reading to do the project," she said. The year-long course was offered for the first time in 1993-94. It will be open to 10th-graders as well as 11th- and 12-graders in 1994-95.

spend more time on their studies. Students completing a vocational major who 1) took courses in computers and word processing, 2) used computers to do assignments in mathematics and vocational classes, and 3) had a lab science class at least once a week scored significantly higher than other students in mathematics, science, and reading in 1993. Students who used meter sticks, telescopes, barometers, stethoscopes, and electricity meters in science classes had significantly higher science achievement than students who had no such experiences.

Educators have an array of technology at their disposal in motivating career-bound students to master challenging tasks: electronic calculators, audio and video tape recorders and players, compact discs, computer hardware and software, TV (regular and interactive), computerized data bases, telephone information services, simulations, drill and practice exercises, Channel One and the Discovery Channel, and music synthesizers. The challenge is to engage career-bound students in using appropriate technology to create, receive, collect, process, and share information.

Electronic data bases respond quickly so that students can save time in researching a topic and devote more time to analyzing the information. Satellite networks linking schools to distant locations provide exciting experiences that engage students in the learning process and lead to improved achievement.

- Students in an English class at Howard Academic and Technical High School in Chattanooga, Tennessee, write scripts and produce TV programs. They also use audiovisual technology to make presentations and oral book reports. Teachers set up a camera and desk in an out-of-the-way space where students can tape their reports and presentations while the teacher and other class members do something else. This approach is especially helpful for students who lack confidence in making reports in front of the class. In the coming year, students will re-write a Shakespeare play in modern English for a TV production.

- At Oak Ridge High School in Tennessee, the mathematics department provides a summer inservice to prepare students to use the graphic calculator. Teachers report that mathematics takes on a whole new meaning for career-bound students when they use these calculators.

If students need more time to master concepts, teachers often use computers to provide that time. While a computer handles routine learning for some students, teachers can give personal attention to other students. For example, teachers who use computers to teach grammar and word processing for writing practice are free to help small groups of students improve their editing skills.

HSTW sites use technology to accelerate or remediate students' performance:

- Hoke County High School in North Carolina, uses computer software that is correlated with textbooks to generate tests to meet curriculum objectives. The tests serve as pre-, interim, and post-assessments. Mathematics teachers use drill and practice software that tallies and displays on the computer screen the percentage of mathematics problems the students have answered correctly. A skill-building software is used for remediation in English, writing, and mathematics. The software offers immediate feedback so students can feel successful with each lesson they master.

- Apopka Senior High School and several other *HSTW* sites have resource centers with computers and software to enable students to work on academic deficiencies. These labs are used most frequently to improve reading and mathematics skills. A resource teacher in the center provides individualized directed learning for students who lack skills and motivation.

The use of technology can save teachers time from administrative duties—time that can be devoted to student learning. Networked computers permit more flexible use of time. For example, teachers can use electronic mail to communicate with other teachers and administrators, take student attendance, assemble lunch orders, schedule meetings, and exchange student assignment information.

Parents also travel the "information highway." The voice mail systems at many schools allow parents to hear reports on their children's progress and assignments. For example, a homework hotline at

Woodlawn High School in Louisiana gives parents a better sense of the work their children are expected to do outside of class.

Some schools have a phone system that can be programmed to contact parents between 6 p.m. and 10 p.m. The system sends messages to let parents know how well their children are performing and whether they need special help with school work. Parents of students who need help receive information on assistance available at the school. These computerized phone systems are a way to involve parents in helping their children meet higher standards.

Strategy 5: Assign Homework to Motivate Students to Meet Higher Performance Standards

The SREB Consortium believes homework is essential in upgrading students' academic performance. SREB's recommended homework policy calls for frequent, worthwhile assignments and regular review of work. The Consortium also believes homework can improve students' study habits and self-discipline. Students in all classes—vocational as well as academic—should have homework that engages them for an hour or more each day.

Homework Contributes to Improved Achievement of Career-bound Students

Regardless of race or socio-economic background, the percent of vocational students spending an hour or more a day on homework is significantly higher at high-achieving *HSTW* sites. The 57 percent of students at *HSTW* sites that made the greatest gains in achievement scores from 1990 to 1993 reported doing an hour or more of homework daily. In comparison, only 36 percent of students at *HSTW* sites with declining reading, mathematics, and science achievement scores spent this much time on homework. Sites that improved between 1990 and 1993 were able to get more students (57 percent, up from 49.8 percent) to do one or more hours of homework daily. Declining sites went from 43 percent of students in 1990 to 36 percent in 1993 who did that amount of homework.

The different experiences of students with similar racial backgrounds and parent education levels at high-achieving and low-achieving *HSTW* sites provide insights into what schools can do to get career-bound students to work harder:

- Homework can lead to higher achievement if students have to study and practice more to learn complicated concepts. Significantly more students at high-achieving sites were enrolled in complex mathematics and science courses in which they needed to do homework to master the materials. Teachers at high-achieving schools teach complex mathematics and science courses in a way that holds students to higher standards.

- Academic content and homework in vocational classes can increase the amount of time career-bound students spend using academic knowledge and skills. Significantly more students at high-achieving *HSTW* sites report that vocational teachers stress academic content and give homework in vocational classes. These students read, use technical materials in their assignments, and use mathematics to solve real problems more often than career-bound students at low-achieving sites.

- One way to get students to do homework is to help them formulate a career and educational plan that underscores the importance of high performance in achieving their goals. More students at high-achieving sites receive help in planning a four-year program of study and receive encouragement from counselors and teachers for taking complex academic courses. More students at these sites plan to pursue further study beyond high school.

- Teachers who enrich their assignments are able to engage career-bound students in doing homework and making extra effort. Significantly more students at high-achieving *HSTW* sites reported enriched learning experiences, including using a computer to do mathematics assignments in mathematics and vocational classes. More students at high-achieving sites completed four or more credits in a vocational major, made presentations in class on special mathematics projects, and used mathematics to solve actual problems in a vocational class or on the job.

- Challenging homework can improve students' attitudes toward school. More students at high-achieving sites (where homework was required) reported satisfaction with a number of aspects of their high school experience. When students do complex things, they gain self-esteem. They benefit from knowing that teachers believe they have the capacity to do something that counts and are willing to help them achieve worthy goals.

Students Work Harder When They Are Actively Involved in Homework Assignments

Students work harder when homework assignments put them "on stage" to make a presentation, demonstrate an idea or product, or compete with others. Academic and vocational teachers at *HSTW* sites get good results when they assign meaningful homework:

- Local, state, and national competitive events motivate career-bound students to work harder.

SENIOR PROJECT AT VOCATIONAL-TECHNICAL HIGH SCHOOL IN DELAWARE INCREASES STUDENTS' ACADEMIC AND TECHNICAL SKILLS

The Senior Project at Hodgson Vocational-Technical High School in New Castle County, Delaware, is a major component of each student's senior year curriculum. In a three-part process, senior students write a career-based research paper, develop a career-related product, and give a public exhibition of their work before a faculty evaluation panel. The intent is to enable students to demonstrate achievement in career and academic areas by showing they have the ability to solve problems, communicate, think critically, work cooperatively in groups, and exhibit mastery of knowledge and skills. To help students prepare their research papers, the 12th grade English curriculum was revamped to include a semester-long technical writing component. Vocational instructors—in conjunction with English teachers and in some cases social studies, science, and mathematics teachers—advise students on their research papers and their products. Academic and vocational teachers serve on the project evaluation committee.

The Senior Project has benefitted students and the school in many ways since its inception in 1990. It has:

- Increased time spent on homework and class work;
- Improved written and oral communication and research skills;
- Improved critical thinking skills;
- Cultivated students' pride and sense of accomplishment;
- Given teachers insight into and appreciation of each other's disciplines;
- Facilitated the further integration of academic and vocational curriculum;
- Stimulated better communication and cooperation among faculty;
- Initiated "backwards curriculum planning" in grades 9-11 to prepare students for skills needed for the project;
- Increased opportunities for individual student/teacher interaction.

ıe *HSTW* sites require students to select one ıore events, including writing and delivering peech, reporting on an entrepreneurial ect, preparing for job interviews, mastering ıted technical materials, or demonstrating ınical skills.

ıe vocational teachers assign a group of stuts to study and discuss technical information n a career field and then teach classmates ıt they need to know. One student said, ıen you get this kind of homework assignıt, you do it. You don't want to give wrong inınation to the rest of the class."

ıdemic and vocational teachers at some sites 'k together to assign homework that cuts oss two instructional fields and may require eks or even months to complete. Teachers ve as coaches and advisors for the projects. e assignment may include a major research ıer for English on a topic from the student's ational field.

work Should Relate to Students' r Goals

ıdents are more likely to do homework if it to their career goals. The head of the maths department at one high school said, "I've l something about career-bound students. If I an assignment that requires them to use matics to solve the type of problem they will ıter as an adult or in the occupational field re studying, they will do it."

emic and Vocational Teachers Work Together to Develop disciplinary Projects

ademic and vocational teachers at *HSTW* re working together to develop interdisciplirojects that are rich in skill and content. For le:

athematics and building construction teachers ked students to design and figure the cost of a ream home."

ocational and English teachers asked students write and edit "how to" brochures on a specialed task in a field of study. Topics included "How to change the oil in an automobile" and "How to repair a leaky faucet." At another school, English and vocational teachers had students write a series of articles for a technical journal.

Vocational Teachers Can Emphasize Academic Skills in Vocational Classes

Vocational teachers have unlimited opportunities to give homework assignments that cause students to practice reading, writing, mathematics, and science skills needed in the workplace. They can also make assignments requiring students to combine mathematics, science, and language arts to learn more about an occupational field of study.

- Culinary arts students at one high school designed an industrial kitchen. They had to justify each piece of equipment, tell where it would be placed, and estimate the cost of the kitchen.
- Computer students at one school filled a scrapbook with bills, letters, and other materials mailed by businesses to people's homes. Students examined the correspondence to identify modern computer techniques.
- Students at one school made a long list of home appliances operated by small computers.
- Students in an office occupations class at one *HSTW* site interviewed local experts on job-related topics. The interviews became the basis of research papers assigned as homework.
- Students in a commercial foods class kept a weekly diary of what they ate and calculated the calories and cholesterol. They used mathematics to cut a favorite family recipe in half or double it.
- One electronics teacher operates the classroom like a work setting to motivate students to read the textbook outside of class. "If you don't stay up-to-date on technical materials in your job or career, you will find it hard to move ahead," he warns. Students must pass a written technical examination on each section of the course. They discover that the way to move to a higher level is to spend additional time reading and studying in their fields.

Homework for Career-bound Students Must Count

Students need to know that mastering a homework assignment or finishing a project is a milestone event in obtaining a high school diploma or a licensing certificate. Traditionally, only two vocational programs have required students to do homework on a regular basis: cosmetology and practical nursing. In both fields, students have to pass a state licensing exam to get a job. Teachers and leaders at many *HSTW* sites are developing assignments that students must complete in order to pass a course, graduate from high school, or obtain a credential for work in an occupational field.

- At a number of *HSTW* sites, English teachers specify that students have to read a book each grading period and demonstrate that they have read it. One teacher has students read two or three paragraphs in a book and then describe what happened prior to and immediately following the passages. Students who cannot do this do not pass that grading period. In fact, they may get an incomplete at the end of the year, and if they attend summer school to remove the incomplete, they must pass the same test. Other English teachers require students to follow prescribed standards in writing a major paper each week or each grading period. Students have to re-write and re-do the work until it comes up to standards. If they do not, they do not pass. A few vocational teachers define very precise goals that students must meet in order to pass the course. These goals include performance in the vocational lab, mastery of written technical materials, and mastery of mathematics concepts underlying the vocational field. To meet the last two goals requires students to do a great deal of reading and mathematics outside of class.

Teachers who give homework and set tough standards need the backing of school leaders, school boards, and parents who are willing to join with them to communicate that the school is serious about motivating students to higher performance levels.

Schools Support Career-bound Students in Doing Homework

Successful *HSTW* sites go out of their way to support students in doing homework:

- After-school homework settings provide a quiet place for students to study.
- To involve parents in emphasizing the importance of homework, some schools provide materials and school-based sessions for parents who want to help their sons and daughters with homework.
- Some schools enlist students to help other students with homework assignments.
- Students use "homework hotlines" to get help by phone from teachers or other students.
- Because many students have jobs, some schools offer "homework help sessions" before or after school. Flexible schedules make it possible for teachers to arrive late and stay late to help students who work at night.

Helping Students and Parents Understand the Importance of Homework

Some students do not see the value of homework. Many of them receive little support at home for homework or outside academic enrichment. The challenge is to get students to do assignments and projects outside the classroom. Students and parents need to know that teachers and school leaders are emphasizing high standards and that homework is a critical factor in meeting the expectations.

To get students to do homework, teachers and leaders enroll them in challenging courses, assign meaningful tasks and projects that help students see the value of what they are doing, and ask them to do things that will count in passing a course, getting a diploma, and earning a credential to work in a given field.

Strategy 6: Involve Parents and the Community

Parental involvement in a child's education is associated with gains in student achievement. Data from *HSTW* sites reveal that students whose parents help them at home and discuss their high school and post-high school plans achieve more than stu-

dents of similar aptitude and socio-economic background.

Parents who stress the importance of education and provide additional instructional resources at home expand the amount of time their children devote to learning. Parents can:

- Encourage their children to study;
- Discourage satisfaction with mediocre performance;
- Encourage good study habits;
- Encourage their children to take challenging courses;
- Nurture their children's curiosity, creativity, and confidence;
- Exhibit a commitment to continued learning;
- Provide a quiet place to study;
- Observe routines for meals, bedtime, and homework;
- Monitor the amount of time students spend watching television;
- Limit the hours for after-school jobs;
- Discuss school events;
- Help students meet deadlines.

Leaders and teachers at successful *HSTW* sites welcome the active participation of parents in helping children make the effort to achieve. Educators cite many examples of students who were failing until their parents were called in to help. Schools use a variety of ways to gain parents' support:

- Recruit parents for the *HSTW* action planning committee or four sub-committees (curriculum, guidance and public information, staff development, and evaluation). Summerville High School in South Carolina is an example of a *HSTW* site that has obtained excellent results by including key parents on all *HSTW* committees.
- Convince parents of career-bound students that their children need to enroll in challenging academic classes. Several *HSTW* sites that dropped low-level academic courses made special efforts to tell parents about the significance of high-level courses and the need to support children in doing the amount of homework necessary to pass the courses. Walhalla High School in South Carolina conducted a multi-faceted public relations campaign to enlist the support of parents and the community for replacing the general track with an upgraded academic core and a major. The school sponsored a career education forum for students and parents, developed a speaker's bureau of teachers and administrators, wrote articles for the local newspaper and radio station, posted bulletin board messages, published a monthly newsletter, and organized a radio panel discussion and call-in program.

  R.J. Reitz High School in Evansville, Indiana, turned to the private sector for assistance in telling parents and the community the reasons for dropping low-level mathematics, science, and English from the curriculum. The school's business partner supported the production and broadcast of TV public service announcements to inform parents and the community of the need for students to enroll in a challenging tech prep or college prep program of study.
- Find volunteer jobs for parents as aides and tutors before, during, and after school.
- Involve parents of students who are struggling academically. Trigg County High School in Kentucky invited parents of underachievers to join school committees in an effort to engage them in their children's studies.
- Conduct workshops to teach parents how to supplement their children's education. This includes providing a variety of resource materials, helping with homework and special projects, and exploring career and education options. Hoke County High School in North Carolina hosts a Parent Night to share information on programs of study and strategies for supporting students in the learning process.

Evidence shows that students from schools with strong ties to the community outperform students from schools that make little or no effort to relate to the community (AASA, 1988). School leaders who

want to increase student achievement seek the support of the private sector and community agencies and organizations. Employers and human services providers can help the school coordinate services and develop new programs that contribute to students' well being, readiness to learn, and transition to work.

Some *HSTW* sites build on school-business partnerships initiated by local employers seeking to strengthen instructional programs related to their types of employment. Educators in New Castle County, Delaware, made effective use of business advisory committees in redesigning the curriculum and facilities of an inner city vocational high school. Committee members conducted an audit of academic and vocational courses at the school and made recommendations to the faculty on what to expect of career-bound students and ways to prepare them to meet workplace requirements.

Some schools ask employers to play a "hands-on" role in education through internships, work experiences, and mentoring programs. Nineteen *HSTW* sites in 16 states are developing plans to add a work-based learning component to the curriculum. A quality program with the potential for job certification and a high-paying career can motivate students to work harder in high school.

Community, business, and civic involvement in the *HSTW* program reinforces the importance of high performance in high school. Many *HSTW* sites include business and community leaders on the site action committee and four sub-committees. Many committee members take their work more seriously if a business or community leader chairs the committee. Students pick up on the idea that the community as well as the school cares about them.

One *HSTW* site organized a community mentoring program. Volunteers from banks, utilities, a TV station, and other local companies spend time with students who need extra help with schoolwork. The mentoring takes place at school or at the mentor's office. One businessman comes to the school during study hall twice a week to assist a student with mathematics. Other students walk to their mentors' offices after school. New mentors receive training and orientation in all aspects of the program, including tips on building students' self-esteem. Some volunteers enjoy mentoring so much that they remain long beyond their initial three-month commitment.

Volunteer programs at many SREB sites provide assistance to students and teachers. Senior citizens—many of them former teachers—are a rich source of volunteers. So are local businesses, which provide tutors through school-business partnerships in education. Parent-Teacher Organization (PTO) members at Trigg County High School in Kentucky coordinate a program in which volunteers tutor students during and after school.

Strategy 7: Arrange Special Help Services for At-Risk Students

Students' personal problems—alcohol and other drug use, gang membership, teen pregnancy, and neglectful and/or abusive parents—can inhibit school attendance and attention to class work. In many cases, the problems are so enormous that they must be addressed before students can make further progress in their studies. Often, school failure and personal problems are part of a syndrome of low self-esteem and poor coping skills. One negative experience in or out of school leads to another.

The increasingly complex needs of high school students call for integrated programs sponsored by social, government, private, and nonprofit agencies and organizations. Social service agencies address basic needs such as health care, nutrition, and counseling, while youth agencies and organizations offer enrichment programs after school, on weekends, and during the summer.

Many schools and communities establish procedures for multi-agency networking and information sharing. For example, Sussex Technical School in Georgetown, Delaware, provides a wellness center in which 96 percent of students are enrolled. Social workers, physician's assistants, doctors, and nutritionists attend to students' medical needs, including physical checkups and prescription drugs.

Sussex Technical School and Howard Academic and Technical High School in Chattanooga, Tennessee, provide full-time external day care centers for their students. The purpose is to keep teenage mothers in school by taking care of their young children during the school day. Parenting classes are scheduled as part of the program, and transportation is provided to and from school.

Strategy 8: Change the School's Organization

HSTW sites that have been able to get academic and vocational teachers to work together have made the most progress in advancing the achievement of career-bound students. Students notice the difference, too. At *HSTW* sites that made significant improvement in student achievement between 1990 and 1993, the percent of students who said their teachers were working jointly to help them master complex academic and technical learning increased annually.

Often, teachers work with a common group of students over an extended period of time. *HSTW* sites that improved the most did the most to get academic and vocational teachers to work together with a core group of students. By organizing into smaller units, the school gives career-bound students long-term association with teachers (other than vocational teachers) who know them personally and take an interest in their educational and career plans. This approach says to students that they belong to a group in which they will receive special help in learning complex academic and technical materials and meeting high performance standards.

HSTW sites use a variety of approaches to get teams of teachers to work with a group of students over a period of time:

- At Swain County High School in North Carolina, vocational and science teachers formed teaching teams and enrolled the same students in their classes as a way to link college preparatory level science courses to vocational studies.
- Academic and vocational teachers at both Hickman County High School in Tennessee and Hoke County High School in North Carolina planned a series of mini-projects to help students practice academic skills through an applied project related to their occupational fields.
- Sussex Technical High School in New Castle County, Delaware, is organized into four clusters: industrial and engineering, business, health and human services, and automotive technologies. Teachers in each cluster have common planning time and work with a core group of students.
- Teams of academic and vocational teachers at Johnson High School in Hall County, Georgia, implemented an academic occupational cluster to help at-risk students learn content from the college preparatory curriculum.

SUMMARY

High schools that increase what they expect of career-bound students are willing to make changes in the school structure, curriculum, and methods of instruction. They are also willing to invest in extra help and time in aiding students to reach their full potential. Specifically, schools become learning communities in which reach high performance standards through the guidance and coaching of academic and vocational teachers, administrators, counselors, parents, and community leaders who believe career-bound students can learn and believe they need access to a high-quality education that prepares them for the future.

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For more information, contact Gene Bottoms, Director, *High Schools That Work*, Southern Regional Education Board, (404) 875-9211.

The High Schools That Work *program is the nation's largest and fastest growing effort to raise the achievement of career-bound students. Created by the Southern Regional Education Board-State Vocational Education Consortium, the program includes over 330 school and school system sites in 19 states.*

These guidelines are based on the Consortium's experience with High Schools That Work *sites during the first five years of the program. The guidelines are designed to be a framework for positive action at the school site and in the classroom.*

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